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Serial No. 10/053,311 David A. Potts
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1 -6 (cancelled)

7. (currently amended) ~~The method of claim 5 further comprising:~~ A method of treating the leach field of a sewage system to improve its functioning, wherein the leach field is comprised of a septic tank in communication with a conduit buried within soil, which soil runs continuously from the conduit to an upper soil surface which is exposed to atmosphere, the conduit having an associated influence zone within the soil into which waste water flows and is acted upon biochemically to make the water more environmentally benign, which comprises: removing the water from said conduit while causing water to flow within the soil to the conduit; then reducing the pressure in the conduit to less than atmospheric pressure, to both further remove water and to cause inward flow of water from the influence zone into the conduit, while impeding vertically downward flow of atmospheric air that, which is induced by the step of reducing the pressure in the conduit, through that portion of the soil surface which lies directly above the conduit, while allowing downward flow of air in adjacent areas of the soil surface, where soil runs continuously down to conduit.

8. (currently amended) A method of treating the leach field of a sewage system to improve its functioning, wherein the leach field is comprised of a septic tank in communication with a conduit buried within soil, which soil runs continuously from the conduit to an upper soil surface which is exposed to atmosphere, the conduit having an associated influence zone within the soil into which waste water flows and is acted upon biochemically to make the water more environmentally benign, which comprises: removing the water from said conduit while causing water to flow within the soil to the conduit; and, then pressurizing the conduit with air or other active gas, to cause said air or other active gas to flow from the conduit into the influence zone, to substantially replace water in influence zone; and, The method of claim 2 wherein the sewage system is comprised of a septic tank, which further comprises: removing a portion of the contents of the septic tank in contemporaneous cooperation with the removing of water from said conduit, before pressurizing the said conduit.

9. (cancelled)

10. (currently amended) A method of treating the leach field of a sewage system to improve its functioning, wherein the leach field is comprised of a conduit buried within soil, which soil runs continuously from the conduit to an upper soil surface which is exposed to atmosphere, the conduit having an associated influence zone within the soil into which waste water flows and is acted upon biochemically to make the water more environmentally benign, which comprises: The method of claim 1 which further comprises: inserting one or more vertical pipes into the soil from the surface thereof at a point or points spaced apart from the conduit, the pipes adapted to act as collection points, and to receive water at their lower ends, wherein said vertical pipes are said collection points, causing water to flow within the soil to one or more collection points by removing water therefrom; and, then pressurizing the conduit with air or other active gas, to cause said air or other active gas to flow from the conduit into the influence zone, to substantially replace water in influence zone.

11-17 (cancelled)

18. (currently amended) The method of claim 3, wherein the inserting of a pipe for injection and uplifting leaves a hole in the surface which further comprises: A method of treating the leach field of a sewage system to improve its functioning, wherein the leach field is comprised of a conduit buried within soil, which soil runs continuously from the conduit to an upper soil surface which is exposed to atmosphere, the conduit having an associated influence zone within the soil into which waste water flows and is acted upon biochemically to make the water more environmentally benign, which comprises:

inserting a pipe into the soil at a point spaced apart from the conduit, to thereby create a hole in the soil; and, injecting air or other gas into the soil at the point with pressure and volume sufficient to uplift or fragment the soil and to create passages for water within the soil;

removing the pipe from the soil and sealing said hole left by the pipe prior to the step of applying air or other active gas;

removing water from the interior of said conduit;

and pressurizing the interior of the conduit with air or other active gas, to cause said air or other active gas to flow from the conduit into the influence zone, to substantially replace water in influence zone.